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DISPOSABLE PAPER SOAP AND MANUFACTURING METHOD THEREOF

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Abstract

The present invention relates to a type of disposable paper soap and a method of manufacture, according to which soap, ethylene glycol, glycerin, silicone oil, olive oil, *aloe vera* oil, and essences are added to a poly(vinyl alcohol) resin solution, and, after complete dissolution, the prepared solution is applied and dried in the form of a thin film, which is press-formed to the required size and thickness, yielding the final product. The recipe of the present invention is simple and logical, the product is convenient to carry and use, inexpensive and beneficial, and possesses strong detergent power.

Claims

1. A type of disposable paper soap, which is characterized by the fact that it is prepared by using a poly(vinyl alcohol) resin solution as a mother liquor and by adding soap, ethylene glycol, glycerin, silicone oil, olive oil, *aloe vera* oil, and essences to the mother liquor, with the weight percent content of the poly(vinyl alcohol) resin in the mother liquor being 10% - 40% and the weight percent content of the other components in the mother liquor being: 17% - 50% for soap, 2% - 6% for ethylene glycol, 1% - 5% for glycerin, 2% - 6% for silicone oil, 2% - 6% for olive oil, 2% - 6% for *aloe vera* oil, and 1% - 6% for essences.

2. A process for the manufacture of the disposable paper soap according to Claim 1, which is characterized by measuring poly(vinyl alcohol) resin in accordance with its proportion, dissolving it in water, heating the solution to 80°C and maintaining the temperature for 4 to 5 h until complete dissolution, followed by adding soap, ethylene glycol, glycerin, silicone oil, olive oil, aloe vera oil, and essence in accordance with their proportions, applying and drying the prepared solution in the form of a thin film, and then press-forming into pieces of the required size with a thickness of 8-20 *si*[*], thereby preparing a final product.

The present invention relates to a type of laundry product, specifically, to a type of disposable paper soap and its manufacturing method.

Following the development of the market economy, people have more opportunity to travel. The small bars of soap offered at hotels, restaurants, and inns are often not used completely and are lost or discarded, which amounts to considerable waste. Patent No. 91101475.6 disclosed a type of paper towel soap and a method of manufacture, in which two surface active agents of different types are mixed and fillers, emulsifiers, etc., are added thereto, yielding a mixed solution, which is subsequently used to fill an impregnation tank, and a paper towel made of fibrous cloth is continuously drawn though the tank, adsorbing the liquid, and is then dried and cut into pieces. When a fibrous cloth is used to adsorb the mixed solution, not only is the adsorptive power low, but the solubility of the fibrous cloth is insufficient, which greatly decreases the detergent power.

It is an object of the present invention to overcome the shortcomings of the current art and provide a disposable paper soap that has a simple and logical recipe, is convenient to carry and use, inexpensive and beneficial, possesses a strong detergent power, and has low cost.

The above-described object is attained by using a type of disposable paper soap, which is characterized by the fact that it is prepared by using a poly(vinyl alcohol) resin solution as a mother liquor and adding soap, ethylene glycol, glycerin, silicone oil, olive oil, *aloe vera* oil, and essences to the mother liquor, the weight percent content of the poly(vinyl alcohol) resin in the

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[*] [Translator's note: "Si" is a Chinese unit of length equal to 0.0032 mm.]

mother liquor being 10% - 40%, and the weight percent content of other components in the mother liquor being: 17% - 50% for soap, 2% - 6% for ethylene glycol, 1% - 5% for glycerin, 2% - 6% for silicone oil, 2% - 6% for olive oil, 2% - 6% for *aloe vera* oil, and 1% - 6% for essences.

The process used in the present invention for the manufacture of the above-described disposable paper soap consists in measuring poly(vinyl alcohol) resin in accordance with its proportion, dissolving it in water, heating the solution to 80°C and maintaining the temperature for 4 to 5 h until complete dissolution, followed by adding soap, ethylene glycol, glycerin, silicone oil, olive oil, *aloe vera* oil, and essence in accordance with their proportions, applying and drying the prepared solution in the form of a thin film, and then press-forming into pieces of the required size with a thickness of 8-20 si, thereby preparing a final product.

In the present invention, the function of poly(vinyl alcohol) resin is to serve as a solubility carrier, adsorbing other admixed components; the function of ethylene glycol and glycerin is to provide flexibility, the function of silicone oil is to eliminate air bubbles generated in the process of solution preparation; and the function of olive oil and *aloe vera* oil is to protect the skin. There is a certain relationship between the thickness of the paper soap of the present invention and the concentration of the poly(vinyl alcohol) resin solution. Generally speaking, when the concentration of the poly(vinyl alcohol) resin solution is high, the thickness of the formed paper soap increases. When the weight percent content of the poly(vinyl alcohol) resin in the mother liquor is less than 10%, not only does film formation present difficulties, but also processing is also difficult. When the weight percent content of the poly(vinyl alcohol) resin in the mother liquor is greater than 40%, not only does this make it difficult for the poly(vinyl alcohol) resin to completely dissolve, but also readily leads to uneven dissolution and formation of clumps, and, as a result, to excessive thickness of the formed paper soap and to an excessively high cost of production. Specific application examples are given hereinbelow.

Application Example 1

Disposable paper soap

20 g poly(vinyl alcohol) resin were added to 80 g water and allowed to sufficiently swell in the water and disperse therein, whereupon the temperature was raised to 80°C and so maintained for 4-5 h until dissolution was complete. After that, 30 g soap, 3 g ethylene glycol, 2 g glycerin, 4 g silicone oil, 3 g olive oil, 3 g *aloe vera* oil, and 2 g essence were added thereto, and these raw materials were allowed to completely dissolve in the poly(vinyl alcohol) resin solution, to yield the necessary solution. The solution was applied and dried in the form of a thin film, which was press-formed into pieces of the required size with a thickness of 10 si using a

press, thereby preparing a final product. The product is suitable for use at hotels, restaurants, inns, and other public places, as well as for personal use on the road.

Application Example 2

Disposable paper soap

40 g poly(vinyl alcohol) resin were added to 60 g water, allowing it to sufficiently swell in the water and disperse therein, whereupon the temperature was raised to 80°C and so maintained for 4-5 h until dissolution was complete. After that, 70 g soap, 10 g ethylene glycol, 8 g glycerin, 10 g silicone oil, 10 g olive oil, 10 g *aloe vera* oil, and 10 g essence were added thereto, allowing these raw materials to completely dissolve in the poly(vinyl alcohol) resin solution, to yield the necessary solution. The solution was applied and dried in the form of a thin film, which was press-formed into pieces of the required size with a thickness of 10 si using a press, thereby preparing a final product. The product is suitable for use at hotels, restaurants, inns, and other public places, as well as for personal use on the road.